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From Jade to Gold in Costa Rica: How, Why, and When

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One of the principal shifts in elite material culture in prehistoric Costa Rica occurred when gold replaced jade as the preeminent valuable material in the middle of the first millennium A.D. Situated between Mesoamerica and the Andes, the region was always one of cultural dynamism, drawing on and influenced by both areas to varying degrees while at the same time creating its own distinctive cultural patterns. The shift from the primacy of jade to gold is interesting in and of itself, especially as jade had ceased to be an item of value in protohistoric and early historic cultures in Costa Rica. This jade-to-gold transition is one of the clearest examples of dramatic culture change in prehistoric America and an example of correspondence between ideology and material culture. At present, little is understood about why this change occurred or how it took place. Here the focus is on the nature of jade use in ancient Costa Rica and the arrival and eventual dominance of gold, emphasizing the suites of culture traits in evidence before, during, and after the transition from jade to gold.

For most of its prehistory, Costa Rica is conceptualized as consisting of three or four cultural spheres. Guanacaste is part of what was a larger region, Greater Nicoya, that included neighboring southeastern Nicaragua and is distinctive in its relatively low rainfall and dry tropical forests. In the southeast, the Diquís subregion also extended beyond modern political boundaries, into western Panama. It sustained a rain forest, and today areas near the Osa Peninsula may receive as much as 4 to 5 meters of rain per annum (Fig. 1). The Central Highlands, where modern San José is located, and the Atlantic Watershed are both areas of tropical forest and high annual rainfall. They are considered two distinct subregions but share many features in common, so here they are collectively defined as the Central Region, which also includes the Central Pacific Subregion. Northeastern Costa Rica—the coastal Atlantic Watershed north of the modern port city of Limón—receives as much rain as the Osa Peninsula and, like it, is little explored archaeologically.

Both Guanacaste and Diquís were involved with distant cultural regions over a long period of time, from about 1500 B.C. onward. The Diquís subregion was always more “southern-oriented” in character, while Guanacaste seems to have kept a finger on the Mesoamerican cultural pulse through time. Both subregions, however, show some evidence of varied cultural overlays in chronologically different periods. Northern-derived greenstone lapidary



Fig. 1 Archaeological subregions and sites of significance in Costa Rica

work and red-on-buff zoned bichrome pottery (the Aguas Buenas complex) appeared in Diquís during the jade-carving period (ca. 300 B.C.–A.D. 500–700) in the rest of Costa Rica. In turn, metallurgy and circular house foundations, traits of southern origin, appeared in the Bay of Culebra in Guanacaste ca. A.D. 800–1000.

A caveat is warranted here: the archaeological cultures of Costa Rica were never Olmec, Maya, Aztec, nor Colombian, or much less, Andean. These larger spheres of cultural influence had a passing effect on indigenous Costa Rican cultures well adapted to tropical forest environments, over which they simply formed a periodic veneer, especially as regards ritual symbolism and its associated material artifacts. Trade in exotic goods, related mythology, and esoteric knowledge among Costa Rican elites must have played a key role in the perceived importance or even predominance of foreign traditions. These were adopted to fit local circumstances, and foreign prestige articles were valued more for the exotic “faraway” belief

systems and rituals they represented, thereby conferring power on those (apparently mostly shamans) who received and possessed them (Helms 1992; 1988; Ibarra Rojas 2001a; Bray, in this volume).

The Central Region experienced the greatest cultural flux during the last three or four millennia, and it is there that an “edge effect” of shifting cultural frontiers can be discerned most clearly (Bray, in this volume). Therefore, the Central Region will be emphasized here, especially the Central Atlantic Watershed, specifically the Linea Vieja (the “Old Line” railroad zone along the Central Atlantic piedmont) and the Turrialba Valley.

In 1974 the relative chronology of jade and gold artifacts, their symbolism, and their associated culture traits were still notably ambiguous. During the 1970s and early 1980s, the first scientific archaeology team in the National Museum of Costa Rica (MNCR), founded and directed by the author, established a C-14-supported cultural sequence for the Central Atlantic Watershed. Included in this work was the identification of two previously unknown ceramic complexes—La Montaña, in the Turrialba valley, and Chaparrón, in the San Carlos plains—that extended the Central Region sequence to ca. 1500 B.C. (Snarskis 1978). The MNCR also conducted the first horizontal excavations in the country and established secure grave lot associations for jade and gold artifacts. This basic work was validated, challenged, and greatly expanded by subsequent MNCR, University of Costa Rica (UCR), and other archaeologists through the late 1980s and 1990s.

Jade: Its Relative Chronology, Sourcing, Distribution, Symbolism, and Associations

The reverence for jade and its potent mythic and power-bestowing symbolism began on a small scale in the Mesoamerican Early Pre-Classic (1200–900 B.C.) and was later adopted by non-Olmec cultures in central Mexico, Oaxaca, and Honduras (Garber et al. 1993: 211–212). The “formal and iconographic traditions of figure-carved jade . . . began and flourished in the seminal Olmec civilization, its allies and trading partners” (Graham 1995: 21). A stylistically different jade-carving tradition was developed by the Maya in the Late Pre-Classic (100 B.C.–A.D. 250) that lasted into the historic period. In Central Mexico and the Maya area, jadeworking continued until the time of Spanish contact. This, however, was not the case in Costa Rica. There, fine lapidary work in jade first appeared in the last centuries B.C., was already waning by A.D. 500, and had virtually disappeared by A.D. 700.

Jade was still a potent symbol in sixteenth-century Mesoamerica. For the Maya, jade represented water and the young, growing maize plant, both vital to human life. Nicholas Saunders (1998, in this volume) emphasizes the symbolic significance of shiny, reflective objects, suggesting that they embody a shamanic worldview. The highest-quality Costa Rican jades indeed have a shiny surface. Unlike glittering gold, however, translucent jades have depth, as if one is looking inside, below the surface, at green plants reflected in a still pool of water. The subtext here is agriculture. Jade symbolized the “basic vital force” responsible for sustenance and survival.

The Olmec–Costa Rica Enigma and Some Hypotheses

Several Olmec jades from non-scientific contexts have been identified during the last sixty years as having been found in Costa Rica (Pohorilenko 1981). Given the number and size of collections inside and outside the country, one can safely say that at least three or four dozen Olmec jades have surfaced there, and perhaps many others are waiting to be found. Here, following Mark Miller Graham (1993; 1995), the term *Olmec* refers to a distinctive art style and iconography recognized in many parts of Mesoamerica during the Early and Middle Pre-Classic periods, but not necessarily the civilization that created large sites, pyramids, and monumental stone sculpture in the Mexican Gulf Coast region. What was the source of raw material for Olmec jades? Why do so many Olmec and fine Costa Rican jades have the same or similar deep blue-green color, as well as a more three-dimensional sculptural style, including some shared motifs and, most likely, symbolism? What were the cultural dynamics and mechanisms that brought Olmec jades to Costa Rica but apparently not to the intervening regions, and why is there a chronological discrepancy of as much as a thousand years between the height of Olmec culture and the known contexts of Olmec-style jades from Costa Rica? Some of these are questions that have been debated by archaeologists and other scholars for more than fifty years. They are addressed here individually.

Jade Source. It is important to distinguish between true jade, known geologically as jadeitite or jadeite, and “cultural jade,” which includes a much wider variety of rocks and minerals that were used to make polished stone artifacts (Harlow 1993). Many have sought a source of jadeite in Costa Rica (Bishop and Lange 1993; Lange and Bishop 1986; Reynoard Baumgarten 1993), but no one has been successful, although some rocks and minerals found on the Santa Elena and Nicoya Peninsulas are the same types associated with jadeite outcrops. George Harlow (1991; 1993) posits that all the componential and color variations known for jade in Mexico and Central America are found in the Motagua River valley in Guatemala and that it was the only source of jadeite for all Pre-Columbian lapidaries. Recent technological analyses using X-ray diffraction, X-ray fluorescence spectroscopy, scanning electron microscopy, and visible near-infrared reflectance, however, suggest multiple sources and tend to distinguish Olmec and Costa Rican blue-green objects from the Motagua source, which did produce the typical Maya apple-green jade (Bishop 1993; Bishop, Sayre, and Van Zelst 1985; Hauff 1993; Lange and Bishop 1986).

In 1998, as part of an exhibition and catalogue on Costa Rican jade, the Metropolitan Museum of Art in New York used X-ray diffraction to analyze 117 pendants, mace heads, and polished celts found in the country, of which 103 were identified as jadeite (Jones 1998: 97–111). One or more geological sources of jadeite likely are or were located in northwestern Costa Rica, and other sources of similar stones are to be found in the Atlantic Watershed (Reynoard Baumgarten n.d.). Some highly polished quartz/green jasper artifacts in the Metropolitan Museum catalogue are visually indistinguishable from others of jadeite. Furthermore, there are too many large areas of eastern Honduras, Nicaragua, and Costa Rica that still have not been systematically investigated so as to preclude the presence of jade

artifacts. Lastly, the likelihood that Costa Rican sources of geological jadeite may well have been mined to virtual exhaustion or were hidden by rising sea levels, seismic activity, and flooding or erosional silting cannot be disproven. The sheer volume of “cultural” jade from Costa Rica—hundreds of thousands of objects were produced over 800–1000 years—suggests that local sources provided a considerable percentage of the raw materials.

Olmec and Costa Rican blue-green jade. Given the above, one cannot reject the possibility that Costa Rican geological jade sources were well known by those who produced and widely disseminated the Olmec art style. The busy trade routes, by sea and overland, were probably much more ancient than the known late prehistoric or historic ones, and may in fact have been utilized before jade objects were produced in northern Nuclear America (Ibarra Rojas 1995; 1999, and personal communication, September 1999). In any case, it is likely that explorers or traders familiar with the Olmec art style and iconography reached Costa Rica but did not have a settled outpost there. Large sea-going canoes of Maya traders were noted by the Spanish. Jade or other greenstone pendants have not yet been found with the earliest Costa Rican ceramic complexes that mostly date to ca. 1500–500 B.C., contemporary with the Olmec art style to the north. Only three of these earliest ceramic components, however, have clear stratigraphic contexts and have undergone hand-troweled horizontal excavations: Tronadora Vieja (Bradley 1994; Hoopes 1994; Sheets and McKee 1994), Guayabo de Turrialba (Snarskis n.d.), and La Montaña in the Turrialba Valley (Snarskis 1978). It is not an unrealistic scenario that carved jade/greenstone may be found one day in context with early Costa Rican ceramic complexes given the relative paucity of stratified early ceramic sites yet known and the clear stylistic (more three-dimensional, sculpted), symbolic (axe-gods, importance of maize agriculture), and raw material similarities between Olmec and Costa Rican jades. Although a number of Early Classic belt plaques in the style of the famous Leiden Plaque have been reportedly found in Costa Rica, the flat Maya-style plaques engraved with historical scenes have no analogue in Costa Rican carved jade, nor do plaques with low-relief compositions.

Olmec artifacts in Costa Rica: How did they get there? If any Olmec jade lapidary artifacts reached Costa Rica during the period in which they were being manufactured (ca. 900–500 B.C.), archaeologists have not yet found them. The forms and decorative styles of several early ceramic complexes, however, suggest contacts at this time. In 1978 a ceramic type not then seen in any later ceramic complexes was defined: Atlantic Red-Filled Black (Snarskis 1978), now known from La Montaña (13 sherds), Chaparrón (15), and Tronadora (5) (see Hoopes n.d.). One sherd from Chaparrón displays part of a thick line and wave-like (eyebrow?) motif (Snarskis 1978: fig. 13n) reminiscent of the motif illustrated in Benson and de la Fuente (1996: 198, cat. no. 36). All these sherds have varying amounts of red pigment, similar to Early Formative black highly polished vessels with gouged-out or excised zones filled with red pigment from Mesoamerica (Benson and de la Fuente 1996: 198, cat. nos. 36, 38; Coe 1995: cat. nos. 59, 61, 102, 103, 108b, 109).



Fig. 2 Olmec hollow ceramic “baby” figure probably made on the Gulf coast of Mexico but said to have been found at Playa Potrero, Guanacaste Province, Costa Rica (after Jones 1998: 40, fig. 24)

A large, white-slipped ceramic seated figure, reportedly dug up near Playa Potrero on the Nicoya Peninsula, was recently described as “a reasonably canonical-looking . . . Olmec ‘hollow baby’ figure of the type known in the Early Formative period in Highland Mexico and San Lorenzo” (Graham 1998: 40, fig. 24) (Fig. 2). Its size, dirtiness, and obviously hasty repair evident when it was first shown to the author at the MNCR pointed to it indeed being found in Costa Rica. Because of its fragility, it seems unlikely that it was transported overland in antiquity. Long-distance maritime trade ca. 1200–500 B.C. must be seriously considered.

More than a dozen Olmec jades have been reported and published as found in Costa Rica. At least several dozen exist in museum and private collections around the world, all but one without reliable scientific excavation data. The exception is a remarkable Olmec jade clamshell with a low-relief carving of a human hand with knotted bow at the wrist and grasping a mythic creature that is half baby jaguar and half insect (Graham 1998; Guerrero Miranda 1998; Snarskis 1979; 1992; 1998: note 20). Jade clamshells of this size and realism were only made by Olmec artisans at the zenith of their technical prowess. The piece is likely solely of Olmec workmanship, except perhaps for two small perforations front to back, added after two double-drilled connecting perforations located on the back of the pendant and invisible from the front, the classic Olmec pendant perforation technique.

An Olmec jade spoon suggests that the Maya inherited, appropriated, or looted some older Olmec jades and modified them. The spoon, in the Instituto Nacional de Seguros

(INS) Jade Museum in San José was possibly used in bloodletting rituals or to inhale psychotropic snuff and is engraved with glyphs dating to the Late Pre-Classic (Graham 1998: 51–52, pls. 26, 28; Joralemon 1976: 256, cat. no. 100). Early Classic Maya belt plaques found in Costa Rica may have also been modified by Maya or by indigenous Costa Ricans who received them. The ancient peoples of Costa Rica appear, however, not to have chosen the engraved Maya jades as models to be followed in local manufacture.

It is significant that indigenous peoples of Costa Rica knew enough about Mesoamerica to appreciate the rarity, value, and high status inherent in imported jade items, but may not have known their original ritual contexts. They appear, however, to have incorporated these objects into their own rituals and symbolic systems. The fact that they knew such objects came from distant lands suggests face-to-face interaction, at least with traders. The probable dates of manufacture for these objects would suggest that Olmec and Maya jades came south together for the most part, probably between 200 B.C. and A.D. 400. This scenario fits well with other types of Mesoamerican trade objects reportedly found in Costa Rica, including Usulután ceramics, slate-backed pyrite mirrors (some with Maya glyphs), Ulúa marble jars, Thin Orange ceramics, and a stucco-painted Teotihuacan urn (Stone 1977: 33–34, 60–65). The salient point here is that almost all long-distance trade articles from Mesoamerica appear relatively early in the Costa Rican cultural sequence, and mostly in the last centuries B.C. and the first centuries A.D. To date only one later Mesoamerican import has been excavated scientifically, a Tohil Plumbate sherd (ca. A.D. 800) at Nacascolo, Bay of Culebra (Snarskis and Salgado G. 1986). Other Plumbate vessels have been reported from northwest Costa Rica, but without controlled contexts (Stone 1977: 33).

A jadeite pendant found in Costa Rica has an avian head similar to two other avian “axe-god” pendants found in jade caches at Cerro de las Mesas, Veracruz (Drucker 1955: pl. 36f) and Chacsinkin, Yucatan (Andrews 1986: 8b). The three avian-head jades have similar crests, beaks, and engraved eyeforms. All have two transverse perforations spaced 3 to 5 centimeters apart for separate strings of beads. This head form on an avian axe-god looks very un-Costa Rican, and Philip Drucker called the Cerro de las Mesas example “unquestionably Olmec, although. . . possibly. . . a trade object” (Drucker 1955: 60). By extension, the Costa Rican piece is also “Olmec,” although it was not initially identified as such (Easby 1981: 136, pl. 66; Snarskis 1998: 66–67, pl. 38).

There is still disagreement on the role of the Olmec jade-carving tradition vis-à-vis that of Costa Rica; some scholars see no connection whatsoever (Pohorilenko 1981), while others maintain that whatever connections or stylistic influence may have existed did not really matter (Lange 1993: 287–288). Elizabeth Easby writes that “interrelationships were too widespread for the tradition of jade carving to have arisen in Costa Rica independent of northern influence. Lacking Maya elements, it can only have come from an earlier source: directly or indirectly from the Olmec” (Easby 1968: 81).

More recently, Graham has asserted that “the florescence of the jade axe [axe-god] tradition in Costa Rica represents a transformation of the earlier Olmec tradition of carving rather large axes that were monuments, more like miniature stelae than ornaments, employed as funerary offerings and perhaps as political gifts. The infantile supernatural being



Fig. 3a Olmec jade “axe-god” reported to have been found on the Nicoya Peninsula (h 14 cm). From the Daniel Oduber collection.



Fig. 3b Carved stone ballplayer figure (h 13 cm). From the Daniel Oduber collection.

[were-jaguar] whose face or body appears on many Olmec axes is, among other things, an expression of fertility and probably the guardian of rulers” (Graham 1993: 22–23). A selection of Olmec “votive axes” is illustrated by Peter David Joralemon (1971: 56–58; 1976: 44, fig. 12).

An extraordinary Olmec axe-god from the collection of former Costa Rican president Daniel Oduber is published here for the first time (Fig. 3a). Made of high-quality translucent blue-green jade, it has a were-jaguar snarling face and retains traces of the original red cinnabar coating. It is virtually identical to Olmec objects illustrated in *The Olmec World: Ritual and Rulership* (Coe 1995: frontispiece, pls. 36 and 90). Reportedly found on the Nicoya Peninsula many years ago, the Oduber jade is one of the clearest examples of the Olmec art style and iconography known from Costa Rica. Also from the Oduber collection comes a remarkable Olmec ballplayer, complete with heavy stone yoke around the waist (Fig. 3b). The piece is fully three-dimensional in white-green stone and shares facial features and stone type with a seated female figure holding an infant (Coe 1995: 158, pl. 34).



Fig. 4 La Selva phase ceramic vessel portraying a human head with bird adornments, likely representing a shaman and his spirit helpers (after Benson 1981: 67, pl. 33). Photograph by Dirk Bakker, Detroit Institute of Arts, Founders' Society.

The archetypal Costa Rican jade form is the so-called axe-god, in which an animal, human, or composite effigy surmounts a celt-like polished blade; such pendants were drilled transversely for suspension. Most axe-gods convey a strong sense of three-dimensionality and often a purposeful ambiguity as regards the figural representation. Many display two tiny zoomorphic figures (usually birds) on top and at each side of the head. While some jades show two simple projections akin to the feather tufts on the head of the harpy eagle—probably the bird most often portrayed, although quetzals follow closely (Fonseca Zamora and Scaglione 1978)—most show the two tiny animals, often highly stylized. A ceramic portrait head of the early La Selva phase sheds light on the symbolism of these tiny figures: the head has two birds over the ears and one over the eyes. These may represent the emissaries of a shaman, who was thought to hear and see what the birds, bearing his spirit, heard and saw in their long-ranging flights (Benson 1981: pl. 33) (Fig. 4). Arguably the most “Olmecoid” jades of Costa Rican manufacture are pendants such as those in Figure 5. For one example, Graham (Graham 1995: 25–26) notes that the pointed U-shaped or handle-like motifs flanking the long tongue are schematic renderings of the distinctly Olmec ritual object most commonly called a “knuckleduster” or *manopla*, an enigmatic artifact and motif which, along with a torch symbol, can be seen in Olmec art (Grove 1987: 61). Most of these objects appear to have been worn singly as pendants.



Fig. 5 Greenstone celt pendant reported to have been found in the vicinity of Bagaces, Guanacaste Province (h 11.2 cm) (after Jones 1998: 71, pl. 49)

Pre-Columbian Jade in Costa Rica: How, Why, and When

Costa Rica does not have an evolutionary history of jade carving, that is, a halting beginning characterized by small, unsophisticated products, followed by progressive complexity in tandem with greater symbolic and ritual importance. Instead, Costa Rican jades appear as full-blown, complex icons that resoundingly mark the beginning of the autochthonous jade-carving period, while at the same time displaying indubitably Mesoamerican, especially Olmec, art styles and iconography. The florescence and apogee of Costa Rican jade carving corresponds precisely with the increased number, extension, and complexity of archaeological sites in the northern two-thirds of the country and the prevalence of maize agriculture, the cultigen most frequently found in macro- and microbotanical evidence; palm nuts are a strong second (Snarskis 1978; 1981a; 1984a).

How. The carving of jade (or similar greenstone) as the primary symbolically significant material in the ritual realm of Costa Rican Pre-Columbian cultures derived directly from earlier Mesoamerican Middle Formative cultures. The original culture contact may have occurred during the Early Formative, when Olmec-culture-bearing tradesmen reached Costa Rica after they learned that precious greenstones were to be found there. But the majority of Olmec jades seem to have arrived in Costa Rica through Maya traders in the

Late Pre-Classic through the Early Classic. David Mora Marín and John Hoopes (personal communication, 1998) have suggested that Olmec-style jades and royal Maya belt plaques may have been placed into circulation in southern Central America as the result of lowland Maya warfare and tomb desecration in the fourth century A.D. If the hypothesis is accepted that most or all Olmec jades were brought to Costa Rica by Maya or Maya-associated traders during the period spanning the centuries before and after Christ, why do Costa Rican jades have a much greater stylistic similarity with Olmec jades, and why have Olmec jades been found in Costa Rica in greater quantities than Maya jades? Pushing back the date of jade carving in Costa Rica will depend greatly on future scientific excavations in early ceramic sites.

Why. The most logical answer to the Olmec–Costa Rica similarities in jade styles is that Olmec travelers or traders got wind of jade sources in Costa Rica and went there to find them (Coe 1962). They may have brought some Olmec-style jades, perhaps raw jade blocks and other articles with them for trading purposes, but all indications point to a rather large disparity in levels of sociocultural complexity during the period around 1200–500 B.C., between the height of the Olmec art style and the appearance of jade in Costa Rica. Why would bearers of the Olmec art style seek out Costa Rica if not for exploratory or expansionist reasons? A source of blue–green jade would be a very good reason indeed. This hypothesis contradicts that which says that all real jadeite carved in Mesoamerica and Central America derived from the Sierra de las Minas source in southern Guatemala (Harlow 1991; 1993) (See also *Addendum*, p. 195). Despite the lack of concrete evidence, however, the theory of a Costa Rican jade source seems most likely because of the sheer quantity of jade/greenstone objects already found—many tens of thousands, with a likely total production of hundreds of thousands. The distance involved is not that great for overland sojourns by Olmec traders or travel by sea along the coast. Although there are few data recovered by scientific archaeologists (Guerrero Miranda 1993), there have been looters’ tales for decades about the numerous early cemeteries along the crests of the coastal ranges of the Nicoya Peninsula, many characterized by deep shaft tombs and, supposedly, Olmec jades, including jade replicas of boats (Frederick W. Lange, personal communication, 1977).

When. The two temporal options are as follows: some sort of trade was carried on with Early–Middle Formative Olmec-culture-bearing representatives or third-party professional traders associated therewith, ca. 1200–500 B.C.; Maya traders brought Olmec and Maya jades to Costa Rica simultaneously during the Late Pre-Classic to Early Classic periods, ca. 300 B.C.–A.D. 500. Given that the beginning of this latter time span is roughly the time when Costa Rican jade carving appears to have begun, this hypothesis is seductive. If it was in fact the case, why were most Costa Rican jades carved in a three-dimensional style much more similar to Olmec than to the two-dimensional Maya pictorial style exemplified by royal belt plaques? More sites from relevant time periods must be excavated in Costa Rica, and the archaeology of the area between southern Mesoamerica and Costa Rica better known, before an accurate scenario can be put forth.



Fig. 6 El Bosque phase (A.D. 1–500) house complex foundation at Severo Ledesma, near Guácimo in the eastern Atlantic Watershed. The sole entryway is at lower left, implying restricted access to the larger, subdivided right side, probably males' quarters. Scale at center right is 2 m in length (after Snarskis 1984b: 168, fig. 2).

Features and Artifacts Associated with the Jade-working Period

There is a distinct suite of characteristics, including site type, features, and artifacts, associated with figural carved jade in the Central Atlantic Subregion. They are notably distinct from those that would arise with the appearance of metallurgy.

Site type. Sites of the El Bosque phase (ca. 300 B.C.–A.D. 400) in the Central Atlantic Watershed and of the Pavas phase in the Central Valley and Central Pacific Subregion are extensive, covering several hectares. These sites are virtually impossible to delimit. The settlement pattern was dispersed, with rectangular houses of different sizes 50 to 100 meters apart. This vigorous flowering of sites, artifacts, and population occurred simultaneously with the surge in maize cultivation and jade carving. Macrobotanical maize and jade have both been found by archaeologists in the largest quantities during this period (Blanco Vargas and Mora Sierra 1995; Snarskis 1976b; 1978; 1984b), although the presence of maize is documented earlier in association with the Tronadora ceramic complex (Hoopes 1994; Mahaney, Matthews, and Vargas 1994; Matthews 1984).

House forms. The shape of domiciles in Costa Rica was unknown for this time period for many decades. MNCR projects in the late 1970s took the first important step toward determining it by conducting hand-troweled horizontal excavations. A slight mound in a looted *finca* proved to be a double house with an open, unroofed, cobblestone central corridor (Snarskis 1978: fig. 28). The rectangular house measured 25 by 15 meters (El Bosque phase), with the entrance apparently at the less “prestigious” side and a larger roofed area at the other (Fig. 6). Tombs or caches with no definition of stone borders were found under-

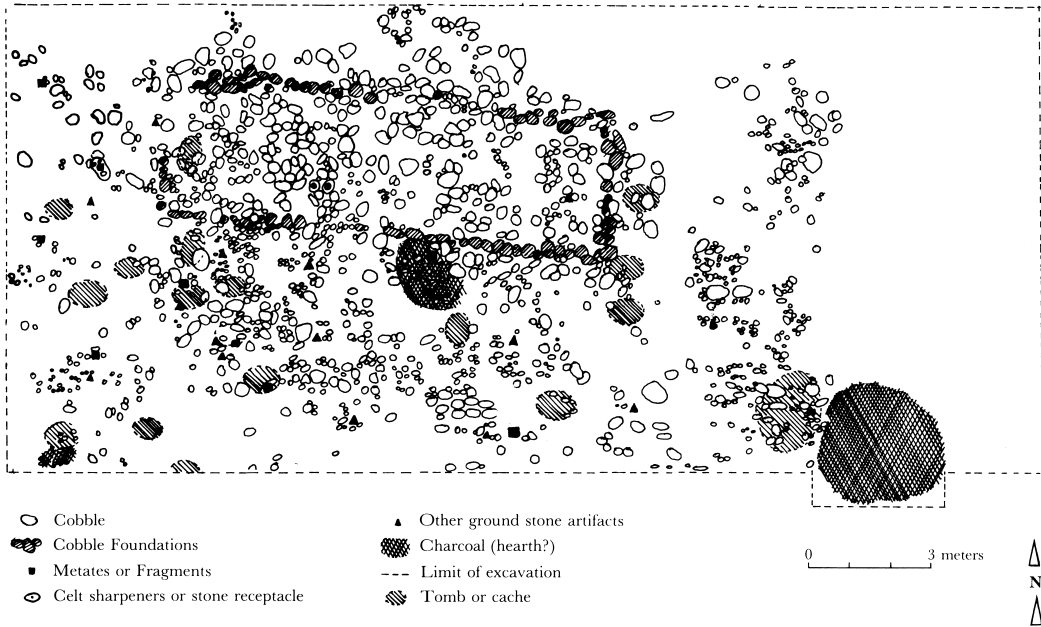


Fig. 7 Plan of Structure 2 at Severo Ledesma, probably a nuclear family house of the El Bosque phase (after Snarskis 1984b: 169, fig. 3).

neath each side, and in proliferation around the house. A major burial was almost two meters below the larger half of the feature (Fig. 6, to the right). It contained twenty-seven artifacts, among them many ornate ceramic vessels, flutes, *maracas*, an incomplete flying-panel metate plate, a necklace of jade disk beads with sporadic larger pendants, and a central jade avian pendant of about five centimeters in length, undoubtedly placed around the neck of the deceased (Snarskis 1992: 146, fig. 1). No bones or teeth were preserved. This larger house likely held thirty to fifty people, the structural divisions probably reflecting a gender division, females on one side, males on the other. This is more clearly defined in later cultures.

Given that jadeworking is likely to have diffused to Costa Rica from Mesoamerica, it is important to note that many northern house forms are remarkably similar to the El Bosque phase structure at Severo Ledesma. A recent published example by David Webster includes a “small Copan rural site” (1998: 32, fig. 10). The other smaller houses Webster illustrates find analogs in the main structure at Barrial de Heredia (CENADA), which had a rectangular or square house form as late as A.D. 800–1000. A small gold “eagle,” along with considerable amounts of polychrome pottery from Greater Nicoya, was found beneath this structure (Snarskis 1992: 153, fig. 6).

Two smaller, perhaps nuclear family structures of the El Bosque phase were uncovered about 100 meters from the larger structure at Severo Ledesma. Each measured approximately 3.5 by 11–12 meters, that is, a spatial proportion of about 1 by 3, which is identical to the proportions of the sections of the larger structure (Fig. 7). Caches of ceramics and stone axes were found within and around these smaller structures, and two mortars—or perhaps celt sharpeners—were found in place within one. Given the climate and acidic soils, no bones

were preserved. This group of structures is all that is known to date of house forms, their spatial relation, hierarchy, and associated features. Similar, less well-preserved foundations are known from several sites in the Turrialba Valley. In the Central Highlands Pavas phase, fired adobe floors are known from many sites, but the house shape is often unclear, not being defined by cobbles or other stones.

Tomb forms. A row of clearly delimited tombs at Severo Ledesma have the same rectangular proportions as the single houses and the two divisions of the larger double house. Perhaps they were “houses” for the dead. Each contained a single jade pendant along with other ceramic and stone artifacts (Fig. 8a–b). The proportions of the single houses, the row of thirteen tombs containing jade, and the segments of the larger house are all approximately 1 by 3. A separate single-corridor tomb contained a quotidian metate, *mano*, pestle, several ceramic vessels, and a small “beak bird” jade (Guerrero Miranda 1998: 29, pl. 15; Snarskis 1978: figs. 126, 126A, 127, 127A–B; Snarskis 1981b: 205, no. 156). Pure El Bosque phase tomb shapes are mostly defined by the top two levels of river cobbles; the lower levels of the walls are often incomplete, and the tomb floors are a jumble of stones, sometimes with a cleared space where the body or bodies were placed. There were some stones in the top interiors of most tombs MNCR excavated, but none had a clear “lid.”

Radiocarbon dates from El Bosque phase features in the Atlantic lowlands are 50 B.C. \pm 90 (UCLA-2175D), from inside the large rectangular house; A.D. 150 \pm 60 (UCLA-2113H), from inside a corridor tomb at the La Cabaña site, which has an El Bosque cemetery 400 meters from later architecture; A.D. 345 \pm 30 (I-7514), from a stratigraphic pit at levels of 80 to 160 centimeters at Severo Ledesma, with transitional period sherds in upper levels. A carbonized maize cob of the race Pollo (W. Galinat, personal communication 1977) was found at 160 centimeters, dating to A.D. 350 \pm 60 (UCLA-2175C), same as previous context; A.D. 425 \pm 30 (I-7721), from a stratigraphic pit at Finca Patricia, a unicomponent El Bosque site near Guapiles. All dates were done on charcoal (Snarskis 1978).

Ceramics. El Bosque complex ceramics from the Central Atlantic Watershed are most often the El Bosque Red-on-Buff ceramic type (Snarskis 1976a, b; 1978), with slipped and polished red lips, interiors (vessel form permitting), and external bases; they show collars of naturally buff-colored clay, smoothed and often floated (Shepard 1956: 191), but left exposed around the vessel shoulder and neck. This area is sometimes left blank but is more often decorated by tool-impressed, appliqué, or red or maroon painted designs. Plastic decorative techniques include fingernail-, shell-, and reed-stamping, wide-line, round-bottomed circumferential incising, combing, scarifying, fluting or channeling, pattern burnishing, and a wide range of appliqué motifs, from simple pellets to baroque zoomorphic *adornos*. Red- and orange-slipped vessels also appear in the El Bosque complex, the latter usually with simple geometric maroon painted designs. To judge from observations of more than 1,500 complete vessels and hundreds of thousands of diagnostic sherds over twenty-five years, El Bosque ceramics from the Central Atlantic Watershed seem to be mostly red on buff, while the contemporary Pavas pottery from the Central Highlands and Pacific apparently has much



Fig. 8a Rectangular tombs at Severo Ledesma resembling contemporary El Bosque phase house forms (after Snarskis 1984b: 170, fig. 4)



Fig. 8b Excavated rectangular tomb at Severo Ledesma. Note the axe-god pendant between the two rocks in the bottom third of the photo. The trowel points north.

less red on buff. Red- and orange-slipped large ovoid jars with maroon paint predominate, along with carinated bowls. In general, Pavas phase ceramics are larger and heavier than those of El Bosque. Zoned red on buff ceramics are common in the Mesosamerican Pre-classic, but rare in northern South America.

Stone. Perhaps the most remarkable aspect of El Bosque lithics is that every stone artifact, no matter how common or lacking in ritual significance, is sculpted. I speak here of ground volcanic stone, as there are little firm data as yet on chipped flint-like stone artifacts and associated techniques. Mullers, or manos, are crafted in bar-of-soap shapes, usually with a finger-width circumferential groove to facilitate grasping; they were used on trough-shaped quotidian metates with a push-and-pull motion to grind hard seeds and grains, such as maize. Pestles are a common find in El Bosque sites, and almost always have a stylized animal effigy crowning the handle, or at least a bulb-like projection (Snarskis 1981b: 201, cat. nos. 135, 136). Stirrup-shaped mullers also appear, solid and rounded on all sides, and used with a rocking motion. Some have no further decoration (Snarskis 1978: fig. 33g), but many have stylized animal or human effigies on the upper side (Snarskis 1981b: cat. no. 137). More elaborate, probably ceremonial metates often show a smallish circular battered area corresponding to the working end of a pestle, most likely caused by the preparation of substances utilized in the performance of rituals.

The complex so-called flying-panel metates of this period (Fig. 9) tell much about the belief system of their makers (Graham 1993). First and foremost, there are no realistic, free-standing human effigies sculpted in volcanic stone known from the El Bosque and Pavas



Fig. 9 Flying-panel metate from the vicinity of Guápiles, Linea Vieja, Limón Province, Atlantic Watershed (h 46 cm) (after Jones 1998: 79, pl. 49). Photograph by Dirk Bakker, Detroit Institute of Arts, Founders' Society.

phases; virtually all portrayals of humans in volcanic stone sculpture are masked with zoomorphic faces and headdresses and form part of a composition incorporating a metate. While postures and body proportions are recognizably human, the masked, exaggeratedly large heads are always in the shape of some animal, probably zoomorphic deities. Other purely animal figures—often birds with a long, recurved beak holding a human head, likely a sacrificial victim—complete these compositions.

The fact that humans could be shown in ceramics, but not in large volcanic stone carvings, and only rarely in jade, speaks to a strong religiosity, with rather severely confined spaces for artistic expression, although the craftsmanship in all media is unquestionable. Men probably made stone and jade carvings, while women made most ceramics, to judge by ethnohistoric records and the potent symbolism and inherent power imbued in the former.

Transition and Overlap: Jade to Gold

All archaeologists know that the transition from one cultural phase to another is an interdigitation or overlap of cultural materials over a time span that may be short or long. In the case of Costa Rica's prehistoric changeover from jade to gold, we can place it approximately between A.D. 400 and 700. High-quality lapidary work in jade or similar hard, lustrous stones had virtually disappeared by A.D. 700, to be replaced in its symbolic role by objects of metallurgy, originating first in Andean South America as early as 1410 B.C. at the Mina Perdida site on the Peruvian central coast (Burger and Gordon 1998).

Doris Stone and Carlos Balsler (1965) describe a cemetery of some 125 tombs in the locality of El Tres, Guácimo, Linea Vieja, which is in the Central Atlantic Watershed where the lowland plain begins (also the location of the Severo Ledesma site). Stone and Balsler personally excavated only three tombs in this cemetery, the rest being dug by *huaqueros*, or looters, apparently without supervision. This site yielded several examples of slate-backed pyrite mirrors, some of which were inscribed with Maya glyphs and typical of those manufactured in southern Mesoamerica around A.D. 420–520. In two tombs (not excavated by Stone and Balsler), this kind of mirror back was supposedly associated with jade pendants, ceremonial mace heads, El Bosque and La Selva phase styles of metates, and a series of gold or *tumbaga* artifacts. From one tomb came a gold frog, a “curly-tailed animal” pendant like those from Sitio Conte, Panama, and a double-spiral nasal ornament typical of those known from the Tairona and Sinú zones of Colombia. Stone and Balsler wrongly assign this object to the Guayas, Ecuador style (Bray 1984: 326). The other tomb contained two gold frogs, a simply styled double-headed bird pendant, fragments of two curly-tailed animals, and a human figure pendant in the Quimbaya style (Stone and Balsler 1965: 317–321). In fact, Warwick Bray (1984: 326) has described all the gold artifact types purported to come from this cemetery as “pure Colombian in spirit.” The point of interest here, of course, is that they were found with material—jades, mace heads, and certain kinds of metates—characteristic of an earlier period. The three pottery vessels Stone and Balsler (1965: figs. 24, 25) illustrate can now be reliably placed in the early part of the La Selva phase (ca. A.D. 400–600); one is a classic example of Zoila Red Incised (Snarskis 1978: fig. 42). It is unfortunate that this valuable information rests solely on the word of local looters.

Stone (1977: 168–169, fig. 228) illustrates an exquisite Quimbaya-style human head of gold, complete with false filigree diadem, from Hakiuv, Talamanca. Associated potsherds (Stone 1977: fig. 230) are modally similar to some in the early La Selva complex. The Talamanca ceramic sequence, however, remains undefined today. There is no discussion at all of the site, tomb types, or contexts, and all objects shown from Hakiuv were probably looted. A similar situation prevails regarding a “Coclé-style copper figurine” and a Galo Polychrome vessel from the La Fortuna site in the San Carlos region. The only information of some value that can be gleaned from these early metallurgical finds is that they fall within the A.D. 400–700 period and may have been imports.

At Taticú near Cartago, Carlos Aguilar Piedra (1981) excavated a fragmented copper or tumbaga anthropomorphic pendant “in the Coclé style.” It was found within a square pit of cobbles and associated with a mass of purposefully smashed *floreros* (long-legged tripod ceramic vases). The practice of smashing *floreros* above tombs has been observed at Pesa Vieja (Snarskis and Guevara 1987) near Cartago and at the early La Selva phase cemetery at La Montaña, near Turrialba (Snarskis 1978). At the latter, one of the corridor tombs defined by cobbles contained a necklace of soft chalk disk beads interspersed with small jade pendants and one of resin, as well as a larger, high-quality jade central pendant. All three of these sites contained early La Selva or Curridabat phase ceramics and may be considered contemporary. More extensive work could well have yielded jade/greenstone and gold at all three sites. Two radiocarbon dates on carbonized maize found inside ceramic vessels from the cemetery at La Montaña were A.D. 250 ± 60 (UCLA 2113-C) and A.D. 650 ± 60 (UCLA 2113-E).

Although it falls outside the Central Region, a recent discovery at the site of Finca Linares, Guanacaste, must be mentioned in that it is the only scientifically documented excavation in Costa Rica where jade-like lapidary work (serpentine) and gold and tumbaga pendants have been found in direct association (Herrera Villalobos 1998). More than fifty mortuary features have been identified there. The burials were capped with ill-defined clusters of cobbles of various sizes; some (including the one described here) had markers of columnar basalt. Burial 18 contained a single individual accompanied by twenty-two ceramic vessels, three effigy-head curved metates with trapezoidal tripod supports, two “jades,” three metal pendants, and one polished axe. The “jades” (actually serpentine) consisted of one narrow, crudely reworked simple vertical pendant, whose engraving style echoes that of an avian axe-god, and a small, plain rectangular plaque. The metal objects were all produced by lost-wax casting: a small frog, a small bell, a complete anthropomorphic pendant with upraised arms and spirals on the hands, a triangular necklace, and a headdress composed of a central raised rectangular element and false filigree ear-like elements, as well as clear ear flares (Fig. 10). All these features, along with the voluptuous semi-flexed legs, are echoed closely in an Initial Group female figurine (Cooke and Bray 1985: 42, fig. 12a; Lothrop 1937: fig. 147). Citing Bray (1981, 1984), Anayensy Herrera Villalobos (1998) argues “These characteristics are considered to be part of the early Quimbaya style.” All the gold objects found in the tomb at Finca Linares belong to Cooke and Bray’s Initial Group (Cooke and Bray 1985: 41–42), which appear to have been imported into central Panama from the Quimbaya, Sinú, and Tairona regions of Colombia around A.D. 200–500. Radiocarbon dates from four Panama-

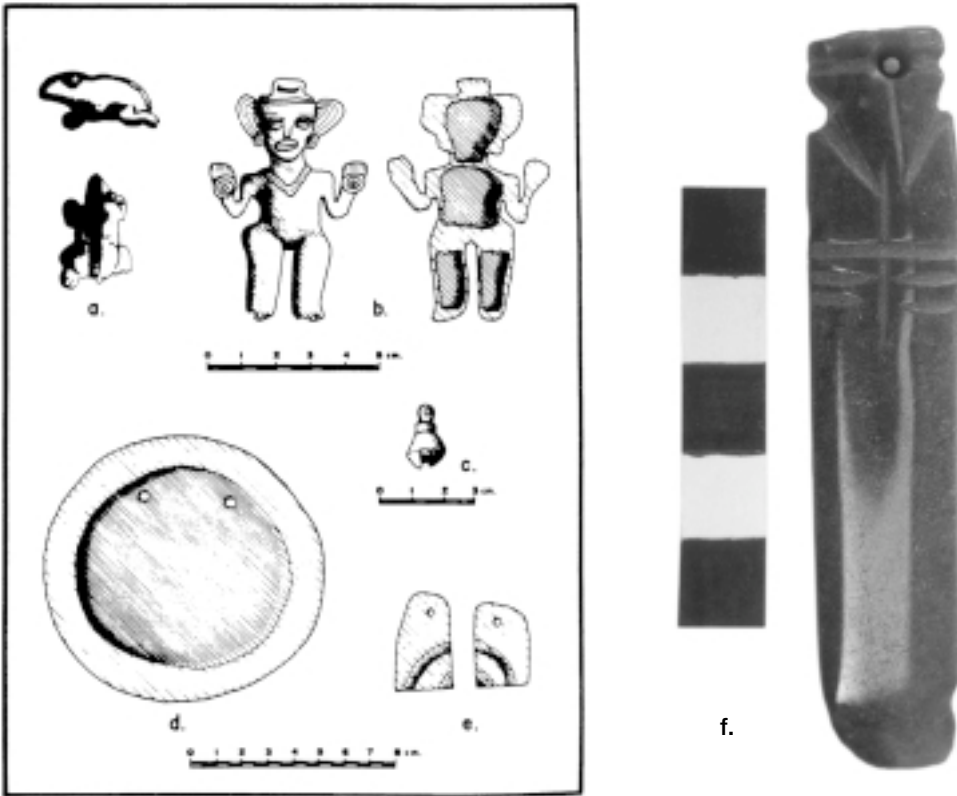


Fig 10 Metal (a-d) and jade (e, f) offerings from a burial at Finca Linares, Guanacaste (after Herrera Villalobos 1998).

nian sites yielding Initial Group metal objects average about A.D. 400 (Cooke and Ranere 1984: 284).

The exceptional range of pottery vessels in the Finca Linares burial includes culinary types Yayal Brown, Los Hermanos Beige, and Monte Cristo Brown, as well as Carrillo Polychrome, Galo Polychrome, and two early varieties of Mora Polychrome. There were also fragments of vessels of Chavez White-on-Red and possibly Guinea Incised. Most of these can be placed in the transitional period of A.D. 400–700.

Features and Artifacts Associated with the Jade-Gold Transition

Site types. Like sites of the El Bosque and Pavas phases, those occupied ca. A.D. 400–700 were apparently extensive and achoritic, given the nature of the pertinent ceramic sherd scatters. The preference for fertile, relatively flat land appears to continue, with no clear evidence of boundary maintenance. Virtually all sites that have been scientifically excavated have been cemeteries, although sherd scatters extend well beyond them. This fact gave rise several years ago to a hypothesis by several MNCR and UCR archaeologists that early La Selva/Curridabat pottery was merely a special mortuary ware of the El Bosque and Pavas

phases, respectively. The fact remains, however, that the El Bosque phase type site of Severo Ledesma did not yield a single La Selva ceramic complex vessel and, conversely, the La Selva phase cemetery at the La Montaña site did not show a single example of El Bosque ceramics. Both sites produced hundreds of pottery vessels, inside and outside tombs. There are, however, sites with tombs that display a combination of El Bosque and La Selva phase ceramic types (for example MOPT-21 near Guácimo; Snarskis 1978). This confirms the hypothesis presented here of the coexistence of jade and gold (and other media) somewhere between A.D. 400–700.

House forms. As noted above, a secure house form has not been documented for this transitional period, although much disturbed, seemingly rectangular or oval foundations of irregular cobbles have been observed at sites in the Turrialba Valley. It is fairly certain, however, that the change from rectangular houses to circular ones, with all its implications for changing belief systems and a new cosmogony, or worldview, began during this period. In this regard, there are two sites that provide interesting, if perplexing, insights.

La Fábrica de Grecia, in the western part of the Central Valley, was a village of circular domiciles with stone cobble foundations and high concentrations of cane-impressed fired adobe (Guerrero Miranda 1980; Snarskis 1984a: 156–157). It appears that adobe was plastered 3 to 5 centimeters thick from ground level to a height of 40 to 50 centimeters on the lashed cane walls of houses. The most prevalent pottery at La Fábrica was late Curridabat phase, approximately A.D. 600–800, with many characteristic long, hollow-leg floreros, globular jars, fine-paste maroon-slipped bowls, chimney-collared jars with short, solid tripod supports and multibrush white paint (Mercedes White Line), and resist-decorated Tuis Fino (Aguilar Piedra 1972; 1976). This pottery is considered to be coeval with the circular house foundations of stone which, coincidentally, show the first clear signs of a more nucleated village type.

La Fábrica, however, is a multicomponent site whose earlier Pavas phase occupation left fired-adobe floors, tombs, and an elite burial that contained three jade tubes and a mace head laid out on three round-plate, tripod metates (Guerrero Miranda 1998: 34, pl. 20). Two copper bells and deer antlers were found next to one of two opposing, cobble-paved entry ramps to the Curridabat B phase principal house. Given the predominance of late Curridabat ceramics at the site, one must presume that the circular structures and the copper bells pertain to around A.D. 600–800; unfortunately, there are no reliable radiocarbon dates for what appears to have been a seminucleated village. There is one date of A.D. 425 ± 80 (UCLA-2167B), but it is from carbon at a depth of 117 centimeters, that is, where the Pavas phase features and ceramics were concentrated.

Tomb forms. Corridor tombs—some 12 meters or more in length, formed of parallel lines of stone cobbles, and arranged in ranks of twenty or more, are known from early La Selva sites, notably the cemetery at La Montaña (Snarskis 1978: figs. 137a–c, 138, 139), but also from several other sites along the Linea Vieja and in the Turrialba Valley. These corridor tombs are constructed more haphazardly than those of the earlier El Bosque phase.

The Pesa Vieja site and several others on the plain south of Cartago are characterized by carelessly formed clusters of cobbles of disparate size, sometimes approximating parallel lines or an oval or circular shape usually not more than 3 to 4 meters in diameter. This tomb type is sometimes marked by *mojones*, most frequently segments of natural columnar basalt. Such is the case at the recently identified site of Pan de Azúcar, at the western end of the Central Valley near Atenas. The tomb described for the Taticú site—cobbles arranged in a rough square—was probably a version of this tomb type.

At the La Montaña, Taticú, and Pesa Vieja cemeteries, one or more tombs had large quantities of ceramics, including many long-legged tripod vases with soot deposits on their exterior and interior, purposefully smashed on the tomb tops, perhaps indicative of funeral *chicadas*, or drunken feasts such as those described for the indigenous peoples of Talamanca (Bozzoli de Wille 1979; Stone 1962).

Stone. Given current evidence, there do not appear to have been changes in carved volcanic stone as drastic as those in ceramics, when compared to the previous El Bosque and Pavas phases. Tripod metates can be rectangular or circular, with some of the former more than 1 meter in length and the latter more than 50 centimeters in diameter. Both shapes always have notches symbolizing human heads, and the round versions may have two somewhat larger human heads carved on opposing edges (Guerrero Miranda 1998: 32, fig. 15, center; Snarskis 1979). These types always have a raised edge and may be considered as ceremonial objects. A new metate type appears also: oval, with a rather deep plate, tetrapod supports (for the first time), which may take the form of whole human figures, female or male, with arms down along the sides and hands meeting at the navel (similar to figural jades). These oval metates range in size from around 30 centimeters to 1.5 meters or more; the small and medium versions carved in a much finer grained stone have carefully detailed human heads along their edges, and often a V-shaped motif at each end of the long axis, a motif that also appears on the headdresses of some realistically sculpted warrior figures. Another oval metate type, usually small, has tetrapod supports formed by the flexed legs of a mammal, perhaps a *coati mundi*, with paws in mouth, forming V-shaped supports. This type may have appeared closer to and after A.D. 800 (Snarskis 1978: fig. 152b).

Loaf-shaped manos are generally flatter and thinner. Stirrup mullers have a more triangular (as opposed to rectangular) opening and are smaller but still with a stylized effigy or bow carved at the top (Snarskis 1978: fig. 148b–c). No fragments of the flying-panel metates have been found in sites of this time span, but the fact is that the only recognizable fragment of such metates found in a controlled context is the example from Severo Ledesma. Flying-panel metates may have continued slightly beyond A.D. 500. Chipped waisted axes of slate or volcanic stone continue (Snarskis 1978: fig. 146b, 146s), as do polished hard stone celts. A teardrop-shaped polished axe, always of dense black stone, may be unique to this time span (Snarskis 1978: fig. 146a–p).

It is likely that the first freestanding stone sculptures depicting realistic, unmasked humans appeared between A.D. 400 and 700. A type that has not yet been found in context in any period portrays men with the long, upturned crocodilian snout so often seen on ceram-



Fig 11 Carved stone figure with crocodile/alligator mask and headdress wearing tubular jade beads from the Atlantic Watershed subregion. (h 37 cm) (after Snarskis 1981b: 212, cat. no. 198). Photograph by Dirk Bakker, Detroit Institute of Arts, Founders' Society.

ics and jade as well. The “upside down wedding cake” headdress, which is invariably associated with crocodile or alligator effigies, is also present on these stone figures: it has not yet been interpreted or understood. The masked male figures, some with prominent genitalia, may strike a jaunty pose with hands on hips (Snarskis 1981b: 212, cat. no. 198) or place their hands opposite each other at the level of the thorax or navel, much like the pose observed on many jade axe-gods (Snarskis 1981b: 212, cat. nos. 196, 197). The most interesting aspect for archaeologists is that all stone figures of this type wear a jade necklace of large tubular beads (Fig. 11). These necklace representations are rare in all media, and in this case show clearly how the extraordinary long jade tubes, usually with concave barrel-shaped elements or perforations, were used: they served as a horizontal anchor across the chest from which other beads were hung vertically, either from the perforations or tied to the concave elements. Decades ago, the fanciful idea that these jade tubes (which can be more than 40 centimeters long) were intended as “breast supports” was added to the literature (Balser 1958: 13; Balser and Instituto Nacional de Seguros [Costa Rica] 1980: 80). Rather, they were probably worn

by male individuals of significant authority, perhaps analogous to the figures on Altar Q at the Maya center of Copán. Although not very realistic, what are probably meant to be jade pendants appear engraved and painted in black on some Rosales Zoned Engraved human figurines from Guanacaste (Snarskis 1981b: 17, pl. 2). While some good quality jade pendants are known, from this time they tend to be smaller on average, and lesser greenstones increase in frequency, including chalk-like disk beads, known as *tiza*.

Ceramics. Some of the basic ceramic types and modes identifying this period already have been described above. Key among them is the appearance of resist-painted (smoked) decoration, prevalent in Colombia for a large part of that ceramic sequence but absent in pure El Bosque and Pavas pottery. The resist technique disappears after ca. A.D. 1000 in the Central Region, but flourishes after that date in the Diquís subregion on small trichrome *ollas*, as on some Colombian examples, Diquís always being more attuned to southern traditions.

El Bosque and Pavas ceramics almost always have sharp, crisp basal breaks and rim or lip angles, but these become rounded-off and softened in the transitional period. An appliqué bead often replaces the previous angular basal break on El Bosque Red-on-Buff bowls and plates. With the exception of the very thick rounded lips of Turrialba Coarse jars—extremely coarse paste with particles up to 0.5 centimeters (Snarskis 1978: fig. 43)—rims and lips are less expanded than in El Bosque and Pavas. The heavy, long solid-leg Ticaban Tripods (Snarskis 1982: 96–97) are replaced by the much more gracile Africa Tripods of the La Selva phase, always with animal or human adornos, some very complex, on the support shoulders; the long, out-curving supports are at least half-hollow, with ceramic balls as rattles (Snarskis 1976a: 109f–h; 1981b: 210, cat. no. 187; 1982: 103).

Fine incising or engraving appears for the first time as a frequent decorative technique, with totally new motifs, on a dark brown slip (unknown in El Bosque), often curvilinear with sharp triangular points or hatched triangles. These are saurian, crocodile, or cayman stylized representations, as are most of the resist-painted motifs. The most frequent incised or engraved pottery, often with resist decoration as well, is the Zoila Red Group (Snarskis 1978: fig. 42; 1982: 104). The bichrome (usually white-filled) Mila Red-Orange Engraved is seen less often (Snarskis 1982: 106) and there is also a precisely engraved dark brown slipped type that is also white-filled—Chitaria Incised/Engraved (Aguilar Piedra 1972; 1976; Snarskis 1982: 108). Roxana Shiny Maroon-on-Orange has geometric or feathery, spiky designs painted on the interiors of dishes or bowls (Snarskis 1982: 102; 1978: j–l). Crocodilian motifs predominate, and supports are usually annular, solid loops, or stubby hollow ovoids with circular perforations on the larger bowls (20 cm in diameter). El Bosque and Pavas never had painted designs on vessel interiors nor globular hollow supports with circular holes.

The hallmark of the La Selva phase ceramic complex is the La Selva Sandy Appliqué Group (Snarskis 1978: fig. 45; 1982: 104), characterized primarily by medium-sized *ollas* with short or large right-angle everted rims and a wide range of plastic decoration, mostly carelessly incised triangles and appliqué pellets (crocodile symbols), and sometimes purple paint and white highlights. It has its analog in the Curridabat complex in the Central Valley

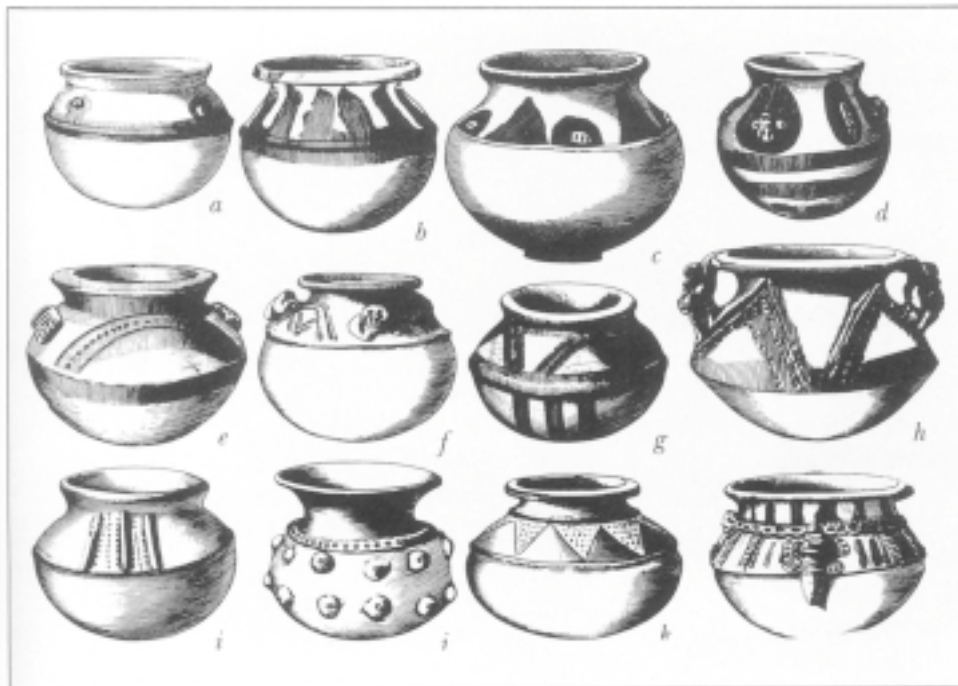


Fig. 12 Curridabat phase ceramics (A.D. 300–500) (after Lothrop 1926: 32, pl. CLXXI)

(Fig. 12). Sometimes seen are incurving rim vessels with annular supports, small double ollas connected by an arching handle, and shallow dishes with outsize hollow effigy supports. Stylized crocodilian motifs predominate. Red-on-Buff pottery virtually disappears, with the exception of some La Selva Sandy Appliqué versions, often misshapen and crudely modeled. Whereas El Bosque had only one paste type, the La Selva complex has several, the most strikingly different being the cream-tone, very fine, rather soft paste of Anita Fine Purple (usually engraved) (Snarskis 1978: Fig. 46a–b), the rocky paste of Turrialba Coarse, and even a soft organic-tempered paste that makes up some vessels of Tuis Fino and some long-legged floreros. The Santa Clara Figurine Group of the El Bosque phase continues virtually unchanged, although more objects are red slipped. Further, slit-eyed, hollow female figurines that are freestanding, orange slipped, and much larger, up to around 20 centimeters, appear first at this time, some seated on round stools and holding infants (Snarskis 1982: 109). Many examples of this figurine type have been discovered during ongoing salvage excavations at Pan de Azúcar (Felipe Sol and Tatiana Hidalgo, personal communication, August 2000). As these figurines are so distinctive, a new type has been established: Pan de Azúcar Figurines; they were also found in some quantity at La Fábrica de Grecia.

This impressive ceramic variety, different tomb forms, changes in metate and mano forms, the first freestanding stone sculpture, the first circular houses, and a shift in settlement patterns are all contemporary with the first imported metal artifacts into Costa Rica, with

metallurgical technology undoubtedly following shortly thereafter, around A.D. 600–700, and several centuries earlier in Panama. Says Bray (1984: 326), “Once the technical knowledge had been introduced into the Isthmus, a whole series of local metallurgical styles emerged, incorporating regional ideologies and sharing designs and iconography with the local pottery styles” (see also Bray 1981; Cooke 1984). Bray continues, “From that time onward, Colombia and the Isthmus constituted a single technological province, characterized by a preference for cast jewelry and virtuoso work in false filigree. Copying was rife, and there was a thriving trade in all directions” (Bray 1984: 326). Bray thinks that trade routes may have included seagoing trade in the Caribbean from Colombia and Panama into Costa Rica, a route that may have ferried technological specialists as well (Bray 1981: 154).

Gold: Its Relative Chronology, Sourcing, Geocultural Distribution, Symbolism, and Associations

For the Spanish conquistadors and other Europeans of the sixteenth and seventeenth centuries, gold was the pipe dream of unimagined wealth, symbol of monetary stability and tangible assets, concrete “heavy” money. Indigenous peoples of Lower Central America and Colombia, however, viewed gold and its alloys quite differently: as symbols of supernatural deities and parasupernatural shamans, a substance that gave them insight into the beyond, a key to the “right way,” a key to the prevailing cosmogony. They had classifications of metal objects based on weight, color, scent, flavor, and brilliance that were considered even before entering into the ramifications of the effigy itself and its symbolism. Nicholas Saunders (in this volume) proposes that “indigenous valuations of gold, silver, [copper] and their alloys derived from prior established ideas concerning the ‘aesthetic of brilliance’ that hitherto had been expressed solely by minerals, shells, plants, animals [iridescent feathers], and natural phenomena, as they appear in nature, and as artifacts. Metals were received into a preexisting, age-old, shamanic and multisensory world of phenomenological experience, that clearly had little in common with fifteenth-century European or indeed modern notions of commercial wealth” (emphasis added).

The reflective, flashy, and superficial brilliance of burnished gold can rival the sun like a mirror, and, in Costa Rica, gold ornaments were not only used in rituals conducted by special personages, but were also worn into battle to impress and intimidate the enemy. In Costa Rica, Panama, and Colombia, the primary symbolism of gold is the sun and celestial phenomena in general. Further, Bray (in this volume) cites “configurations of symbolic meanings” that link gold, the sun, light, a fertilizing (male) solar energy, and priestly control over these things. Drawing upon Gerardo Reichel-Dolmatoff’s extensive work, Bray notes that the Colombian Kogi people refer to the sun as *Mama Nyui*, the same root found in their word for gold (*nyuiba*). Gold, particularly tumbaga, was produced using fire and is tied to radiance and heat.

Contrast this with jade, which symbolized cool, green pools of water, reflected green maize plants, fertility, seed, and quetzal feathers. In Costa Rica, María Eugenia Bozzoli de Wille (1979), through interviews with Bribri and Cabécar peoples, has been able to learn

that these indigenous groups had a dichotomy of things “above” and things “below.” The realm below housed saurians, snakes, toads or frogs, all things female, and water. (Note that jade would fit well in this mythical category; it was polished using water and is identified with coolness.) Things above included monkeys, large birds (eagles and buzzards), jaguars, bats, the principal deity, and all things male in general. The above-below dichotomy is mediated toward synthesis by the lives of the Bribri on earth. Only members of the monkey and jaguar clans were eligible to become caciques.

In Costa Rica, gold is and was found primarily in placer deposits in riverbeds. The southwestern Osa Peninsula was apparently the richest source of gold, but the metal is also found in the Central Pacific Watershed and in some parts of the Nicoya Peninsula, where all that glitters in some beach sands is indeed gold, but practically unrecoverable for the most part (Frederick W. Lange, personal communication, 1977).

There was a tremendous difference between the technologies and final products of the jadeworking peoples and the metallurgical industries of gold and its alloys. With the rise of metallurgy, it is possible that previously marginalized tribes, clans, and other members of society came somehow to dominate access through trade or otherwise latched onto the new technology and became elites, mediators between the supernatural and the real worlds. The suite of new cultural traits that came along on the coattails of the new metallurgical technology was even more striking than metallurgy itself.

As stated earlier, metallurgy had begun in Andean South America around 1400 B.C. Jade appeared in Mesoamerica ca. 1200 B.C. and in Costa Rica around 300 B.C., to be followed by gold ca. A.D. 500 or slightly before. Why did the reverence for jade and its skillful carving techniques precede gold in Costa Rica by some 800 years? One can only assume that there were trade networks in place between Mesoamerica and Costa Rica before jade carving began in the latter. Did the difficult tropical forests of the Darién Gap frustrate trade with the south? Probably not, as this kind of environment was home for the Central Atlantic Watershed Costa Rican peoples. It must have been a matter of established custom, the “right thing to do,” when voyaging or trading with northern cultures. This contact was strengthened when indigenous Costa Ricans took jade and similar greenstones to their hearts and began almost a thousand years of prodigious lapidary production.

It is important to remember that with time, the population increased in the Central Region of Costa Rica and certain natural resources decreased. No natural disasters are known during the period around A.D. 800–1550 other than those in the Arenal area (Sheets et al. 1991) and one which left a 10-centimeter layer of ash on Bay of Culebra coastal sites ca. A.D. 1000 (Lange 1976). It is virtually a certainty, however, that earthquakes, floods, droughts, and other volcanic eruptions occurred.

Features and Artifacts Associated with the Goldworking Period

Site Type. Sites possibly reveal the most striking changes that coincided with the rise of gold as a high-status ritual material. There was an obvious site hierarchy, but, unlike Bray (in this volume), it is not possible to say whether there were three levels or more or fewer. Some

larger sites, such as Guayabo de Turrialba, were clearly nodes of trade and political-military dominance, situated on the border of two environmentally different subregions, and with cobblestone roads extending for many kilometers, leading to lesser sites, and with access to the Central Valley as well as the Atlantic lowlands. Frank Findlow and his colleagues (Findlow, Snarskis, and Martin 1979) discern an interesting trend in Pre-Columbian settlement patterns for the central Atlantic subregion. Early ceramic sites (1500–500 B.C.) were located near biotopes important for hunting and collecting, but sites pertaining to other periods up to A.D. 1000 revealed an increasing preference for alluvial farmland. In the five or six centuries before the Spanish conquest, however, the site location pattern becomes random, indicating that factors other than agriculture predominated. These factors were likely sociopolitical boundaries and defense. Guayabo is a good example. It is bordered on one side by a sheer 250-meter cliff, on another by a steep mountain slope, and on a third by a small river. Guayabo had only one main access route up a ridge coming off the Turrialba volcano, where the principal cobble road ascends. The two-meter-wide road travels several kilometers from a lesser village, reaches two 4-meter-wide stairways flanked by two large guardhouses, and then widens to 9 meters. The trajectory of this entry causeway crosses a plaza and ends in line with one of the two staircases leading up the main, circular, stone-faced mound, 4 meters high, which during Guayabo's occupation supported a conical-roofed circular house about 20 meters high, itself echoing the cone of the Turrialba volcano far above.

The entry experience to Guayabo must have been impressive and intimidating. It is not known what was placed around the plaza. There were likely caches or burials to judge by the much smaller La Cabaña site outside Guácimo on the lowlands, where several small deposits of special artifacts were found that included ocarinas, figurines, and miniature vessels (in two cases inside much larger tripod urns with large appliqué trophy heads). At Guayabo, there must have been all this and more, perhaps wooden totems, life-size stone sculptures, shrunken heads, skulls, and so on. A boulder with a depression carved out for offerings sits at the foot of the staircase of the main mound. This large staircase was apparently the access for “outsiders,” while another staircase, facing the interior of the site, was presumably for the inhabitants.

In the principal mound, Aguilar Piedra (1972) found two tombs, one with a gold avian pendant, trade sherds from Diquís and Nicoya, and long columnar basalt tenons that held the mound in place. Because Aguilar Piedra took his carbon samples from the fill of the main mound, they are contaminated by earlier occupations, the first of which was the much older La Montaña phase. Tombs beneath house mounds are common in Costa Rica and are reminiscent of the Nahuange tomb described by Bray (in this volume, citing Mason 1931: 32–36), where a “rectangular grave lined with stone slabs and sealed by capstones” (Costa Rica's stone cist tombs of this period) was found within a circular mound with a retaining wall.

Perhaps the most fascinating aspect of settlement patterns in the period when gold dominated and jade had almost completely disappeared was the appearance of a distinct city or town “plan,” in essence a shared mental template for architecture and site organization widely disseminated throughout the Central Atlantic Watershed and Central Valley, and apparently the central Pacific region as well, not to mention the Diquís subregion in southwest Costa Rica, which was always more southern-oriented.

In the sparest terms, this architectural template consists of a central node of features, an “elite precinct,” composed of a major cobblestoned causeway, usually the main entry to the site, which eventually debouched into a square or slightly rectangular open plaza entirely free of stones and lower than the surrounding landscape. This is, in fact, the pit from which earth was removed to build up the major, and highest, circular house mounds, always stone faced for retention of fill. Invariably, there are two major mounds, one higher than the other. No matter their respective heights, which varied according to total site size, the diameter is almost always approximately 20 meters. The highest mound typically displays a scatter of sherds of decorated, special-purpose, and imported ceramics in the interior floored area and especially around its exterior edges. A central hearth is always in evidence. Prestige burials or caches that often contain gold usually are located beneath the living floor surface. There may be one or two entrance stairways or ramps. This was probably the domicile of the *de facto* rulers of the site, be they caciques, shamans, or generally high-status persons. The open square plaza was likely the site of meetings with “others” for commercial or political purposes, as described by Ibarra Rojas (1995; 1999) for ethnohistorical times, as well as for ceremonies, and dances. The second major house mound, also stonefaced, was always lower, although its diameter was sometimes slightly greater, and sometimes varied slightly in shape (Snarskis 1984a; 1984b; 1978).

The Spanish chronicler Fray Agustín de Cevallos sent to the king of Spain in 1610 a report in which he describes several customs of the people then living in the central Atlantic lowlands of Costa Rica: “They live in palenques, which are forts built in the native fashion . . . the chiefs have the women that they desire *all in the same house* and the common people generally have one” (Lothrop 1926: 446, emphasis added). There seems little doubt that the formal and functional differences of the two “main house mounds” in this era corresponded to an accepted social division: the high-ranking wives or concubines in the house mound of lower height (always with multiple hearths, metates, and manos) were dedicated to the maintenance and sustenance of the “ranking class” housed in the adjacent higher mound (Snarskis 1992: 154, fig. 7).

Guayabo de Turrialba is the type site of the goldworking period (Aguilar Piedra 1972; Fonseca Zamora 1979; 1981). In it, one sees a series of architectural features that allows extrapolation about cultural customs and sociopolitical organization. There is one principal entryway and two lesser roads of cobblestone; one of the latter goes over the small river on the north side and the other skirts the mountain slope to the west. It is evident how, once within the site, things like size, height, position, and cultural access were carefully controlled.

Guayabo at this time had large open aqueducts that funneled water from diverted stream beds and springs nearby, huge *laja* (volcanic flagstone) bridges, and underground water conduits of *lajas* following the trajectories of the street lines to control the great water flow inherent to the subregion. Interrupting the secondary entrances were circular pools of water directly in the middle of the roadway. These restricted direct access to the inner segments of the site. Guards or some other barriers may have been there too. This pattern becomes clear as one approaches the elite precinct, with additional circular pools and a large, 15 by 8 meter rectangular pool (fronting the roadway and across from the second main

staircase off the main mound). Because much of the site remains unexcavated, it is not known how complex the system of underground aqueducts and pools was during its Guayabo prime. There is an aqueduct beneath every known paved causeway. Other large house mounds were built away from the “spiritual center” of Guayabo, perhaps indicative of other high-ranking precincts. It is apparent that water was key in many symbolic ways. For instance, smaller (1.5 by 2 meter) catchments or wells appear around the principal mound and nearby large house foundations. They seem to act as artificial springs for the elite.

Approaching the elite precinct of Guayabo from within the site, one sees circular pools of water in the middle of the cobble pavements only 12 to 15 meters from the main mound. One of these is spanned by a *laja* stone bridge, a giant slab of volcanic rock estimated to weigh more than 10 tons, that was the likely entry for the elite. A series of banked or terraced smaller circular houses sits on a hill to the southwest, toward the cliff. Eight to ten stone statues in human form, only 20 to 40 centimeters in height, were found near one of them. Nearby, and perhaps fallen away from its original position near this mound, is a large boulder with high-relief sculptures of a split-tail crocodilian on one side and a jaguar on the other (Aguilar Piedra 1972). Guayabo also has communal water basins, rectangular in shape (approximately 5 by 10 meters) and fed by springs channeled into ducts beneath cobbled pavements. These drained into the natural riverbed to the north, so there was a constant renewal of fresh water through them at all times.

Sites with an elite precinct city plan in the Atlantic Watershed include Guayabo (Aguilar Piedra 1972; Fonseca Zamora 1979; 1981), Najera (with a circular plaza, Kennedy 1968), La Zoila (Snarskis 1978), Las Mercedes (Hartman 1901; Stone 1977), Costa Rica Farm (Stirling 1969; Stone 1977), Parasal (Herra Villalobos n.d.), La Cabaña (Snarskis 1978; 1984a; 1984b) and Cubujuquí (Gutiérrez González and Mora Sierra 1988), the last in the Sarapiquí subregion. In the Central Highlands, these include Ta’Lari de Pacuare, at the northernmost part of the Talamancas (Hurtado de Mendoza and Gomez F. 1985), Aguacliente de Cartago (Valerio Lobo 1989; Valerio Lobo, Solís Alpizar, and Solís del Vecchio 1986; Vázquez Leiva 1989), and Barranca (Chávez Chávez 1994). Sites of this type are also found in the Central Pacific Watershed, including Lomas Entierros (Solís del Vecchio and Herrera 1991) and Pozo Azul (Corrales Ulloa 1992; Corrales Ulloa and Quintanilla Jiménez 1996), suggesting a pervasive belief system and worldview that was shared by the inhabitants of these three central subregions.

To confirm the view that this group of architectural features, related mythology, and goldworking all came from northern South America and Panama around A.D. 600, prior models from that area must be found. Among the most obvious is Buritaca 200, *la ciudad perdida* (Cadavid Camargo and Groot de Mahecha 1987; Groot de Mahecha 1980; Soto Holguín 1988). With its cobbled causeways, circular stone-faced house foundations, large terraces, and strategic location, one cannot help but feel that such architectural customs, and probably belief systems, came to the Central American isthmus along with metallurgical technology (Bray, in this volume). To these elements we may add the appearance of resist-painted ceramic decoration and a shift in major long-distance trade routes.

House forms. Circular houses of the goldworking period are described above. Other symbolic factors may have contributed to this drastic shift from quadrangular houses. A change in house form reflects a change in worldview. House form was never casual, but mirrored the accepted cosmogony. The Kogi of Colombia viewed the universe as a giant egg with nine levels, or sections, with humankind mediating the middle section (Reichel-Dolmatoff 1985; 1990). These sections, of course, are circular, and a similar mythology may have prevailed in Pre-Columbian times.

The lesser houses in gold period sites in the Central Atlantic Watershed are simple circular house foundations of large river cobbles (30 to 40 centimeters), over which a pole or cane and thatch circular structure was erected. Sites distant from large rivers employed field stones. In several sites, there is evidence of adobe around the lower part of the cane walls (Guerrero Mirando n.d.), but in others this does not occur. The circular stone foundation kept out pests and humidity. Houses were almost certainly conical roofed, with poles apt for hanging hammocks (González Chaves and González Vásquez 1989; Stone 1962). Four to five hearths are usually found on the secondary main mound, evidence of its domestic focus. Walls and roofs had openings through which debris could be passed. At La Cabaña, great quantities of decorated and polychrome trade sherds were found around the exterior perimeter of the main mound, indicating cleaning of the roofed floor area. In examples of larger, higher circular mounds, stairways of cobblestones were used. In smaller house circles, stone ramps sufficed. On the main mound at La Cabaña, the staircase was 5.5 meters wide, almost as wide as the Guayabo stairs. It led directly to the empty plaza, facing the major incoming cobble road. It must be emphasized that the river cobbles used to make the road, as well as those shoring up the main mounds, are extraordinarily uniform in size, all oval, and 30 to 40 centimeters in length. This represented a concerted effort at scouring the riverbed, probably for kilometers, to find the right size cobbles to give the visible architecture symmetry. A similar concern is represented by the construction of some stone cist tombs. La Cabaña extended up along the Guácimo River, but several features have been eroded at its curve fronting the site. A stairway to the river that likely existed has probably been washed away, as have other house features (Snarskis 1984a; 1984b).

In the change from a quadrangular house shape to a circular one, the Mesoamerican tradition of assigning specific deities and powers to the four cardinal points was altered (although not abandoned, at least among the Kogi of Colombia). The round shape of houses probably related to something representationally akin to the Kogi universal egg and the circular shape of the sun. There may have been a conflict at one point about which supernatural concepts reigned. As with jade and gold, there must have been a period during which different house forms coexisted; this is more apparent in the Central Valley.

Tomb forms. The characteristics of the tomb forms of this goldworking time period are so striking that early archaeologists named the entire period Stone Cist (Lothrop 1926). In Colombia, variations of stone cist tombs appear as early as the centuries around the time of Christ, before and after, for example at San Agustín (Duque Gómez and Cubillos 1988: 100–192, fig. xii). These tombs are usually more carelessly constructed, with lajas and other stones

of disparate sizes. They are called *tumbas de cancel* in Colombia, and they frequently have lateral chambers, like some shaft tombs. They almost always have some sort of stone, either cobbles or *lajas*, placed vertically (*de canto*), as well as floors or lids of stones. Stone cist tomb types in Colombia predate the Costa Rican examples by some 400 to 700 years. The corridor-shaped tombs of the El Bosque phase in the Central Atlantic Watershed continued into the early La Selva phase cemeteries, and the formal difference is apparent. El Bosque never had stone cist tombs; these came later, with the transition from jade to gold.

There are smaller oval or circular stone mortuary or cache features that have been observed for this period, but they almost never form part of a cemetery; it is likely that they were caches outside houses or peripheral to stone cist tombs. These latter frequently contain the remains of more than one individual, as if they were marked above ground and reused (Vázquez Leiva 1989). The only cemetery excavated completely is that of El Cristo, Cartago, dating to ca. A.D. 1100–1300. A total of 116 stone cist tombs were excavated, all rectangular in form, with lids and floors, and made with *lajas* and river cobbles (Blanco Vargas, Guerrero Miranda, and Salgado Gonzalez 1986). Among the contents were elaborate rattles, a ceramic axe in the form of a hafted stone axe, and a copper bell with a quartz crystal clapper. The number of tomb offerings that included metal was minimal. The El Cristo cemetery was the first complete, small cemetery excavated scientifically. It also offered insight into the use of gold objects among the population. Only two tombs contained gold objects, a lesser percentage than that cited by Bray (in this volume) for several sites in the Tairona region of Colombia. A circle of stone surrounded the cemetery in its entirety, supporting interpretations of the circle as an important symbol in this time period.

Stone cist tomb forms predominate in the Central Region of Costa Rica after about A.D. 800 and continue until the Spanish conquest. Bozzoli de Wille (1979) has described ethnohistorical accounts that refer to the prohibition of the dead body touching earth, a possible explanation for the cist or chamber in which bodies were buried. Those prehistoric tombs that lack a cap or a floor most probably had covers made of wood. The use of wood was customary in historic times (Lothrop 1926; Stone 1962). Wooden slabs carved with zoomorphic effigies such as those described by Columbus (Lothrop 1926) usually are not preserved. There are, however, several beautifully carved, human-sized volcanic stone slabs for laying out the dead; these were then erected vertically (they all have tab bases) like modern tombstones. One of these was found in place a century ago at the Guayabo site and is in the MNCR. Cemeteries were placed outside the residential sites and beneath the houses themselves. In the Central Valley, calcareous *lajas* are frequent, alongside volcanic ones (Snarskis 1992: 158, figs. 9 and 10), but in the central Atlantic lowlands river cobbles, selected for size, predominate (Fig. 13).

Ceramics. Pottery from the last seven centuries before the Spanish arrival declines in quality, and there seems to be less of it. Sites seldom show dense or widespread sherd scatters. It may be that the importance of the craft declined in relation to other activities. Most pottery is a continuation of La Selva Sandy Appliqué, but with a more friable, thick-tempered paste and crocodilian faces and triangular hatched motifs with maroon and white

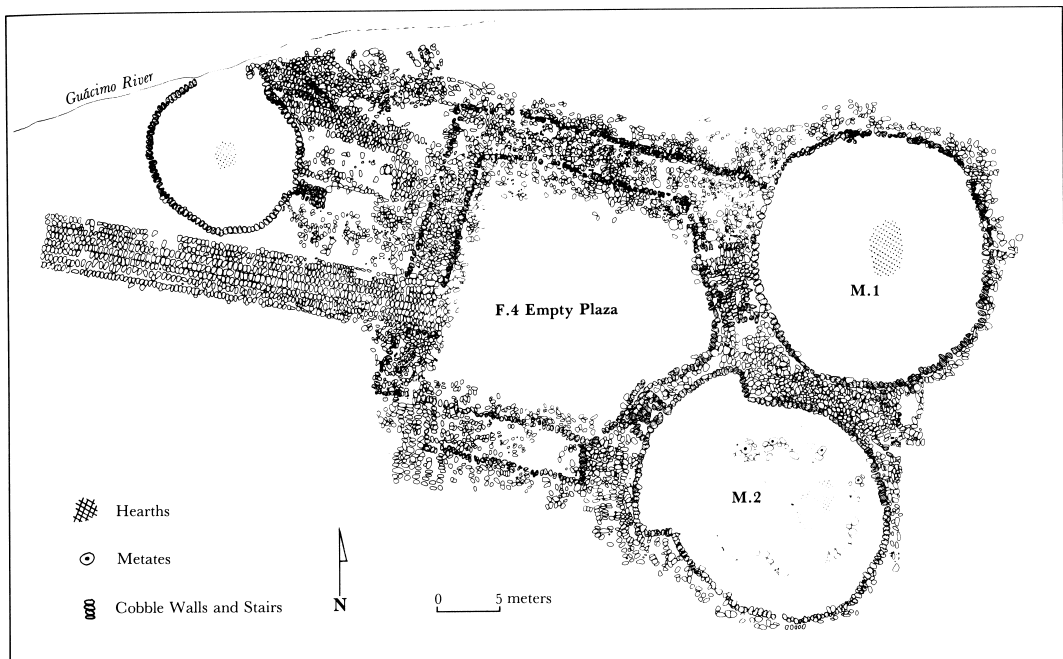


Fig. 13 Partial plan of the La Cabaña site (ca. A.D. 1000–1550) showing use of round structures in a quadrangular plan (after Snarskis 1992: 154, fig. 7).

painted details—La Cabaña Fine Slipped and La Cabaña Coarse. Better-preserved versions of the former are often covered with a variety of plastic decoration in an “overloaded” style; careless incision, tool stamping, and appliqué pellets and fillets impressed to look like chains may be combined with one or two crudely modeled animal heads, all on the same vessel. When present, tripod supports are almost always some kind of stylized, hollow zoomorphic head. Lothrop called this pottery Stone Cist Ware, after the tomb types in which it was found (Lothrop 1926: 346–352, pl. CLXXX; Snarskis 1982: 113). The late ceramic complex is known as the La Cabaña Group (La Cabaña phase) in the Central Atlantic Watershed (Snarskis 1978: 266–267), and the Pavones Group (Cartago phase) in the Central Valley (Aguilar Piedra 1973; 1976). Stone (1977: 167, fig. 227) reports several crude Stone Cist Ware vessels found with a Venetian glass bead in the western Turrialba Valley, but no tomb form or other contextual data are given. While rim sherds of the larger culinary ollas of this late period are found frequently, not a single whole vessel is known, suggesting that they were not placed in burials, as occurred with large ollas in earlier times.

After around A.D. 800, trade pottery—especially the brilliant polychrome-painted vessels of Greater Nicoya, primarily Mora, Papagayo, and Birmania/Highland Polychrome—begins to appear in considerable quantities as mortuary offerings and within general site debris. Seemingly, their occurrence is low (1 to 4 percent), but as these overall totals often surpass 20,000 sherds, the numbers of foreign polychromes may run into the hundreds. There is clear evidence that they were highly esteemed and valued: five of the seven pottery vessels in the principal tomb under the main house at Barrial de Heredia were imported

polychromes. Crack-lacing repairs are noted on whole vessels as well as on sherds in a percentage much higher than that for local ceramics. All this data bespeak well-developed trade networks of medium to long distances. Imported ceramics in earlier times were very rare, although some jades may have been imported from northwest Costa Rica to the Central Region. It is unknown what was being traded in return. It may well have been organic things—feathers from rain forest birds, psychotropic drugs, foodstuffs (such as *pejibaye*), animal pelts, or slaves or prisoners. It was definitely not Central Region pottery.

Diquís polychromes were not traded north to the Central Region, but there was a mutual familiarity with styles, vessel forms, and symbolism. What may have been traded north were the accoutrements of metallurgy: placer gold, stingless bee's wax, and some gold pendants. The elegant, thin-walled Tarragó Bisquit pottery, sometimes found with Spanish iron tools in Diquís, only rarely made its way to the Central Region (Snarskis 1992: 158–160, figs. 10, 11).

As in the previous transitional period, a wide variety of quite different ceramic types are evident. It remains unknown whether there were discrete centers of manufacture for each, which were then traded to other sites, or if most of the types were made by all major sites. The former is more likely, as it stimulated activity along the multiple trade networks (Snarskis 1978: 407).

Stone. The inhabitants of the late nucleated sites did not do careful sculpting of quotidian food-processing tools of ground stone. Rather, ordinary metates were large, flat cobbles (up to 60 to 70 centimeters) taken from riverbeds and worn into a depressed grinding area through use. Similarly, manos and pounders were small cobbles chosen for their approximate hand-sized shape and proportions, and grinding or battering wear was produced only through use. This contrasts sharply with the customs of the jadeworking El Bosque phase sites.

Ceremonial metates, on the other hand, continued to be manufactured with the same remarkable skill seen a thousand years earlier. Forms changed drastically, however, and wear from use on these sculptures is extremely slight or absent. Indeed, some large annular-base circular versions have been called altars. The carved elements are always zoomorphic; they have no human heads around the edge. Much smaller oval or rectangular versions, always carved of finer-grain stone, seem more like trays or receptacles than grinding implements.

The most striking shift in stone sculptural styles concerns the representation of the human figure. As noted previously, the jadeworking El Bosque and Pavas phase cultures portrayed the human figure exclusively with a zoomorphic mask or headdress, and as part of a larger, more complex volcanic stone composition, never as a realistic, freestanding unmasked human. They did find it acceptable to portray realistic humans in a variety of poses in the small ceramic figurines and ocarinas of the Santa Clara Figurine group. A thousand years later, this convention underwent a drastic change: realistic, freestanding, unmasked human figures in volcanic stone became the norm, in keeping with a relative cultural secularization mirroring the more defensive, quasi-militaristic posture of the late “city-states,” such as Guayabo, in combination with their allies. Even more interesting is that these sculptures present sociopolitical and cultural stereotypes: the classic warrior, with axe in one hand and severed

human trophy head (usually shrunken) in the other; the prisoner or captive, probably destined for sacrifice or sale, always shown nude, with hands bound; the shaman or *curandero*—often referred to as a *sukia* in Costa Rica—hunkered down in a seated position and either smoking or blowing or sucking through a tube to cure sickness. There is also what may be another version of the shaman as a hunkered down figure, always male, like all those above, with subtle, abstracted facial expressions indicative of a drug trance; finally, there is the version of a female, supporting her breasts with her hands, in what may be a pose of sexual receptivity or fertility. Also in the range of freestanding realistic stone sculpture are trophy heads, often with an expression of rictus. These may have eyes and mouth sewn shut or teeth exposed in a skeletal fashion. Distinct from these are the portrait heads, which appear to portray living personages with serene or noble visages.

The largest, most politically important sites—including Parasal, Guayabo, Las Mercedes, and likely many others—contain life-size, or larger than life-size, sculptures of humans, perhaps of real personages. Such glorification of the individual suggests possible personality cults around great leaders in late period cultures. Stone (1977: 180–81), citing Hartman (1901: 7–13), describes life-sized male figures, some holding trophy heads, measuring from 1.8 to 1.85 meters, which is more than six feet tall, that had fallen off the main mound at Las Mercedes. The skeletons of individuals with statures of around 1.8 meters have been excavated in one or two stone cist tombs near Cartago, but the sculptures could just as well represent an exaggerated size. At Las Mercedes, the foot of one of these life-size male stone statues was found broken off in its mount adjacent to the doorway to the main mound (Hartman 1901: 9).

The Predominance of Gold in Costa Rica: How, Why, and When

The initial entry of Colombian trade pieces and, later, metallurgical technology, accompanied by a suite of cultural elements rich in change for central Costa Rica, eventually predominated in all of the country in one way or another. Frederick W. Lange (1992: 430–431) disagrees with G. R. Willey's assertion that "metallurgy can be used as a horizon marker" (1971: 277), going on to say that it spread from Pacific South America, through Pacific Central America, to Pacific Mexico, gradually, from 200 B.C. to A.D. 700. Lange notes that one finds more gold where it is expected to be found in Costa Rica (Diquís subregion), and more jade where it is expected to be found (Guanacaste subregion). As was the nature of indigenous Costa Rica, however, northwest Costa Rica combined elements of two traditions: the inhabitants made gold pendants and had circular houses, but they expressed a Mesoamerican iconography on virtually all of their polychrome ceramics, probably due to their long-standing trade route relations to the north.

How. It is generally accepted that the first metal objects to reach central Costa Rica were trade goods from Colombia that, given their distribution based on archaeological finds, seem to have come by sea, across the lower Caribbean, to the Central Atlantic Watershed and, on the Pacific side, from the Azuero Peninsula to Diquís and farther north. It is feasible that

some gold or associated materials came overland, but these were probably from Panama, rather than Colombia.

Why. Why gold came to dominate in Costa Rica cannot yet be answered with certainty, but there are some clues. There was an apparent decline of some major Maya centers in the Early Classic, perhaps disrupting trade routes with some parts of Costa Rica (Hoopes 1985; 1992). There is also the possibility of the exhaustion of jadeite sources in Costa Rica or barriers to them caused by geological phenomena. The fall of Teotihuacan may have been a factor in cutting off trade routes. The dynamic in Mesoamerica must be added to the burgeoning size of chiefdoms in northern Colombia, which can be extrapolated to prehistoric times from mostly ethnohistoric data. Among others, Bray (in this volume) speaks of a three-tiered hierarchy of sites in which some of the largest, such as Pueblito, have up to a thousand circular house foundations. No site in Costa Rica remotely approaches this size, and indeed Bray speaks of “incipient states.” Cut off from their power-bestowing trade routes to the north, much of Costa Rica, certainly the Central Region, turned to the south and the new prestige, elite-associated material, gold. When metallurgical technology reached the Central Region, it was rapidly adopted, and the central Atlantic lowlands became a major producer of Cooke and Bray’s International Style (Cooke and Bray 1985), mostly small gold or tumbaga pendants of human shamans or rattle-bearing dancers, plus the tiny eagles and frog pendants with exaggeratedly spatulate legs (Fig. 14). Artifactual changes reflected changes in belief systems and possibly who was in power, that is, who dominated the trade networks to the south. The Diquís subregion was so southern oriented that lime flasks for coca chewing and a clear camelid ceramic effigy are known (Snarskis 1981b: 220, cat. no. 240).

When. The first metal objects to reach Costa Rica were trade goods from Colombia, ca. A.D. 500–600. Metallurgical technology followed shortly thereafter. The domination of gold-focused mythology and many of the associated cultural features described above took hold after around A.D. 800 and continued until the arrival of the Spanish. The precise dynamics that gave rise to this change in sacred materials and belief systems will probably never be fully understood, but capable archaeology and excellent ethnohistorical analyses like those of Bozzoli de Wille (1979) and Ibarra Rojas (1999, in this volume) will be invaluable.

Conclusions and Hypotheses

The differences between the jadeworking period and the era of gold and its alloys in central Costa Rica are striking and distinctive enough to warrant comparative discussion of the larger cultural contexts of these times. In many ways, they are a study in contrasts. Between 300 B.C. and A.D. 500, sites were large and diffuse, with no evidence of sharply demarcated boundaries or defenses. Accessibility to good agricultural land seems to have been the primary consideration in site location. Craft production involved artisans engaged in detailed work on materials that required great amounts of labor to produce a finished product. Intergroup conflicts were apparently infrequent. Instead of warfare, communal energies were

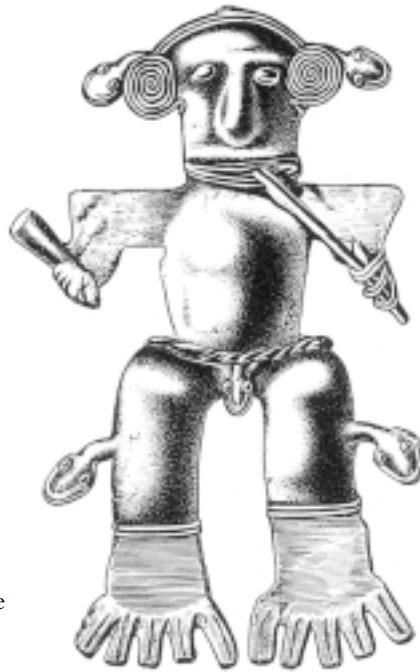


Fig. 14 Cast pendant of a splay-foot male figure (after Lothrop 1950: fig. 107)

invested in ceremonies (and sacrifices) dedicated to agricultural fertility. This was an expression of a worldview that required the propitiation of agricultural deities with regularly scheduled ritual. Human sacrifice was the ultimate gift to the gods to ensure a proper relationship between mortals and supernaturals and the continued abundance of crops and the humans who depended on them.

During the age of gold, A.D. 800–1550, all of this changed. Agglomerated ceremonial centers developed. Some of them may have approached the level of nucleated city states, while others may have been under quasi-military control. Strict boundaries defined these locales, which had defenses and control systems for entry and exit. Sites were chosen for strategic reasons and as commercial nodes. Most ceramics and stone tools were of poor quality, although ritual stone sculpture was finely done. Preoccupation with defense and dominion of territory also meant that political relations were equally or more important than previous concerns of harmonious relations with gods and seasonal cycles. Endemic small-scale warfare became common, and sacrifices to propitiate deities coexisted with larger-scale battles, the new dynamics of intercommunal conflicts.

Thus, in this hypothesis jade represented an expression of an ethos and, likely, a reality of widespread, small-scale communities attempting to live in harmony with their environment and their fellow humans. In contrast, the flashy brilliance of gold became an expression of the aggressive, expansionist goals of elites in hierarchical systems likely under demographic and environmental stresses. Future research will likely refine this rather stark, contrastive picture of the ages of jade and gold in Costa Rica. At present, however, this model of

a long-lasting, stable agricultural society succeeded by a darker, more secular age may seem to fall too easily into a romanticized view of the past. Societies do, however, spin out of balance and control, and all the available evidence suggests that the pattern described above is the best interpretive model, for the moment. This model also offers a clear challenge to scholars for its elaboration or refutation in future research, no matter what view of the past is held.

Addendum:

A recent article reported the discovery of “Olmec blue” jade at the famous Las Minas jadeite source in the Motagua river valley of Guatemala (Seitz et al. 2001). It remains to be seen if this was also the source for Costa Rican blue-green jade.

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197 *From Jade to Gold in Costa Rica*

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